



## INVESTIGATOR'S ANNUAL REPORT

United States Department of the Interior  
National Park Service

All or some of the information you provide may become available to the public.

OMB # (1024-0236)  
Exp. Date (11/30/2010)  
Form No. (10-226)

<b>Reporting Year:</b> 2009	<b>Park:</b> Shenandoah NP	<b>Select the type of permit this report addresses:</b> Scientific Study	
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<b>Project Title (maximum 300 characters):</b> Adopt-an-Outcrop Volunteer Monitoring Program			
<b>Park-assigned Study or Activity #:</b> SHEN-00358	<b>Park-assigned Permit #:</b> SHEN-2009-SCI-0003	<b>Permit Start Date:</b> Feb 23, 2009	<b>Permit Expiration Date:</b> Dec 31, 2009
<b>Scientific Study Starting Date:</b> Nov 04, 2008		<b>Estimated Scientific Study Ending Date:</b> Dec 31, 2060	
<b>For either a Scientific Study or a Science Education Activity, the status is:</b>  Continuing		<b>For a Scientific Study that is completed, please check each of the following that applies:</b>  <input type="checkbox"/> A final report has been provided to the park or will be provided to the park within the next two years  <input type="checkbox"/> Copies of field notes, data files, photos, or other study records, as agreed, have been provided to the park  <input type="checkbox"/> All collected and retained specimens have been cataloged into the NPS catalog system and NPS has processed loan agreements as needed	
<b>Activity Type:</b>			

Monitoring
<b>Subject/Discipline:</b> Plant Communities (Vegetation)

<b>Purpose of Scientific Study or Science Education Activity during the reporting year (maximum 4000 characters):</b> The purpose of the Adopt-an-Outcrop program is to provide additional monitoring of rare plant populations and communities at rock outcrops threatened by high visitor use and/or invasive species encroachment.
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<b>Findings and status of Scientific Study or accomplishments of Science Education Activity during the reporting year (maximum 4000 characters):</b> <p>In 2009 the Adopt-an-Outcrop volunteer monitoring program was continued at 21 rock outcrop study sites and 160 observation points. Volunteers monitored vegetation conditions (particularly rare plants) and visitor behavior using observations and photopoints. In 2009 the program used a total of 21 volunteers, who collectively contributed 710 volunteer hours to the park.</p> <p>The AOP program is designed to help limit human trampling of rock outcrop sites, and provide monitoring data to track changes in rare plant population cover, health, and threats. To that end, funding was used to hire a seasonal biological science technician, purchase uniform items, and to print monitoring manuals. Regular site monitoring, as well as database development, image organization, and monitoring manual revisions were completed over the course of the season.</p> <p>Minimizing impact to the sensitive plant communities on cliff areas is one of the primary concerns of the program. Therefore, detailed monitoring is done only twice a year. Other site visits focus on visitor education, barrier repair, and trash removal.</p> <p>The plant monitoring data collected by AOP volunteers focuses on a series of photopoints. These images will allow park staff to observe changes in the cover and health of the rare plants over time. Among other things, data are also being collected on the area covered by each rare plant, plant characteristics, and the proximity of invasive plants to rare plant populations.</p> <p>A particularly useful aspect of the program is the way it increases the presence of uniformed personnel on rock outcrops. This gives visitors more opportunities to ask questions and learn about rock outcrop conservation issues, and may help deter unwanted behaviors.</p>
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<b>For Scientific Studies (not Science Education Activities), were any specimens collected and removed from the park but not destroyed during analysis?</b> No
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<b>Funding specifically used in this park this reporting year that was provided by NPS (enter dollar amount):</b> \$12000	<b>Funding specifically used in this park this reporting year that was provided by all other sources (enter dollar amount):</b> \$0
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<b>List any other U.S. Government Agencies supporting this study or activity and the funding each provided this reporting year:</b>
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<b>Paperwork Reduction Act Statement:</b> A federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. Public reporting for this collection of information is estimated to average 1.625 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the forms. Direct comments regarding this burden estimate or any aspect of this form to Dr. John G. Dennis, Natural Resources (3127 MIB), National Park Service, 1849 C Street, N.W., Washington, DC 20240.
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